

## IN THE SPECIFICATION

Please replace the paragraph beginning at page 4, line 15, with:

The general objective of the herein invention ~~herein~~ is to visualize and quantify the polymer melting in plasticating screw machines in real time, safely and non-invasive to the process, to be able to maintain its thermal regime providing a method and a device according to claims 1 to 12. The problem is solved by capturing images in-line and experimental data from the inside of the plasticating screw machine through a device with a small optical window, which allows the use of an observation probe with operating temperature limits and with an illumination system. The device allows to visualize the differences in optical properties between the solid state and the melt state of a polymer allowing to describe its complete melting mechanism in a plasticating screw machine.